PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Rolf STEFANI et al.	Group Art Unit: 2617
Application No.: 10/642,627	Examiner: P. DESIR
Filed: August 19, 2003	Docket No.: 113391
For: SECURITY MESSENGER SYSTEM	

DECLARATION UNDER 37 C.F.R. §1.132

I, Rolf STEFANI, a citizen of the United States, hereby declare and state:

1.   I am the DIRECTOR OF PRODUCT DEVELOPMENT for ARINC, Inc.

2.   I have had a total of 7 years of work and research experience in Communication Capabilities and Technologies.

3.   I am a named inventor in the above-captioned patent application.

4.   I make the following statements in support of U.S. Patent Application No. 10/642,627:

As the Director of Product Development at ARINC and having been involved with numerous demonstrations of new communications capabilities and technologies, I would like to point out that until recently, the notion of using a conventional ACARS VHF communications channel as a media to transmit video and/or digitized voice communications was not realistic. VHF ACARS has a bandwidth of 2,400 bits/sec which is why the ACARS standards are small text packet message oriented. In other words, ACARS equipment and processors package very defined and specific messages into 256 byte text based messages. The whole point of ACARS is to ensure and guarantee

message delivery and that the messages are complete and correct when delivered. By virtue of both ends of the communications channel (avionics & ground systems) communicate with ARINC systems, processors and routers in the middle allows the system to provide message by message validation (sequence numbers and checksums) which ensure that all messages are received, are correct and are sequenced appropriately.

Voice and video data packet size presented very difficult problems in firstly, converting into character based data, secondly, the massive size of the data, and breaking the data into packages that could be accommodated by ACARS VHF systems. For example, a single ACARS message (256 bytes) can convey the estimated arrival time of an aircraft where as a single video frame may be 4,000 bytes of data and would require approximately 16 individual ACARS messages. Extrapolating that there could be 30 frames per second of video, ACARS could not support the massive number of messages required to deliver video with out exploiting compression techniques and our new VDLM2 technology.

The difficulty is in converting data into and back from ACARS messages. Very complex rules apply that are somewhat proprietary as well as complex. Assuming it is obvious to use ACARS VHF or HF to communicate voice or video would be comparable to thinking it would be possible or easy to send video over a teletype system, i.e., slow and character based like ACARS.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment under Section 1001 of Title 18 of

the United States Code, and that such willful false statements may jeopardize the validity

of the application or any patent issuing therefrom.

Date: Oct 4, 2007

Rolf Stefani